

AMENDMENTS TO THE CLAIMS

1. (Currently Amended) A method for generating a three-dimensional audio scene with a sound source whose spatiality is extended, comprising the steps of:

a) generating, by a computer, a sound object composing the audio scene; and

b) generating, by a computer, three-dimensional audio scene description information including sound source characteristics information for the sound object, the three-dimensional audio scene description information including a plurality of point sound sources that model the sound source,

wherein the sound source characteristics information includes spatiality extension information of the sound source, said spatiality extension information enabling the sound source to include more than one dimension, and includes the size and shape of the sound source expressed in a three-dimensional space, the size of the sound source determined by a difference of coordinates in the three-dimensional space from a center of the sound source represented by the spatiality extension information, and the plurality of point sound sources are distributed uniformly over a surface defined by the three-dimensional space, the sound object including the plurality of point sound sources, wherein the spatiality extension information of the sound source further includes geometrical center location information representing a center point of the sound source, wherein the spatiality extension information of the sound source includes direction information of the sound source extended spatially and sound source dimension information that is expressed as $x_0-\Delta x, y_0-\Delta y, z_0-\Delta z$; x_0, y_0, z_0 ; and $x_0+\Delta x, y_0+\Delta y, z_0+\Delta z$.

2. (Cancelled)

3. (Cancelled)

4. (Previously Presented) The method as recited in claim 1, wherein the spatiality extension information of the sound source further includes direction information of the sound source and describes a three-dimensional audio scene by extending the spatiality of the sound source in a direction vertical to the direction of the sound source.

5. (Currently Amended) A method for consuming a three-dimensional audio scene with a sound source whose spatiality is extended, comprising the steps of:

a) receiving, by a computer, a sound object composing the audio scene and three-dimensional audio scene description information including sound source characteristics information for the sound object, the three-dimensional audio scene description information including a plurality of point sound sources that model the sound source; and

b) outputting, by a computer, the sound object based on the three-dimensional audio scene description information,

wherein the sound source characteristics information includes spatiality extension information, said spatiality extension information enabling the sound source to include more than one dimension, and includes the size and shape of the sound source expressed in a three-dimensional space, the size of the sound source determined by a difference of coordinates in the three-dimensional space from a center of the sound source represented by the spatiality extension information, and the plurality of point sound sources are distributed uniformly over a surface defined by the three-dimensional space, the sound object including the plurality of point sound sources, wherein the spatiality extension information of the sound source further includes geometrical center location information of the sound source dimension information, wherein spatiality extension information of the sound source includes direction information of the sound source extended spatially and sound source dimension information that is expressed as $x_0 - \Delta x$, $y_0 - \Delta y$, $z_0 - \Delta z$; x_0 , y_0 , z_0 ; and $x_0 + \Delta x$, $y_0 + \Delta y$, $z_0 + \Delta z$.

6. (Cancelled)

7. (Cancelled)

8. (Previously Presented) The method as recited in claim 5, wherein the spatiality extension information of the sound source further includes direction information of the sound source and describes a three-dimensional audio scene by extending the spatiality of the sound source in a direction vertical to the direction of the sound source.

9. (Currently Amended) A machine-readable medium that stores executable instructions thereon which, when executed by a machine, cause the machine to generate a three-dimensional audio scene with a sound source whose spatiality is extended, by performing the operations of A three-dimensional audio scene data stream with a sound source whose spatiality is extended, comprising:

generating a sound object composing the audio scene; and

generating three-dimensional audio scene description information including sound source characteristics information for the sound object data, the three-dimensional audio scene description including a plurality of point sound sources that model the sound source,

wherein the sound source characteristics information includes spatiality extension information, said spatiality extension information enabling the sound source to include more than one dimension, and includes the size and shape of the sound source expressed in a three-dimensional space, the size of the sound source determined by a difference of coordinates in the three-dimensional space from a center of the sound source represented by the spatiality extension information, and the plurality of point sound sources are distributed uniformly over a surface defined by the three-dimensional space, the sound object including the plurality of point sound sources, wherein the spatiality extension information of the sound source further includes geometrical center location information of the sound source dimension information, wherein the spatiality extension information of the sound source includes direction information of the sound source extended spatially and sound source dimension information that is expressed as $x_0-\Delta x$, $y_0-\Delta y$, $z_0-\Delta z$; x_0 , y_0 , z_0 ; and $x_0+\Delta x$, $y_0+\Delta y$, $z_0+\Delta z$.

10. (Cancelled)

11. (Cancelled)

12. (Currently Amended) The machine-readable medium as recited in claim 9, wherein the spatiality extension information of the sound source further includes direction information of the sound source and describes a three-dimensional audio scene by extending the spatiality of the sound source in a direction vertical to the direction of the sound source.

13. (Currently Amended) The method as recited in claim [[2]]1, wherein the three components are an x component, a y component and a z component.

14. (Currently Amended) The method as recited in claim [[6]]5, wherein the three components are an x component, a y component and a z component.

15. (Currently Amended) The machine-readable medium~~data stream~~ as recited in claim [[10]]9, wherein the three components are an x component, a y component and a z component.

16 – 25. (Cancelled)